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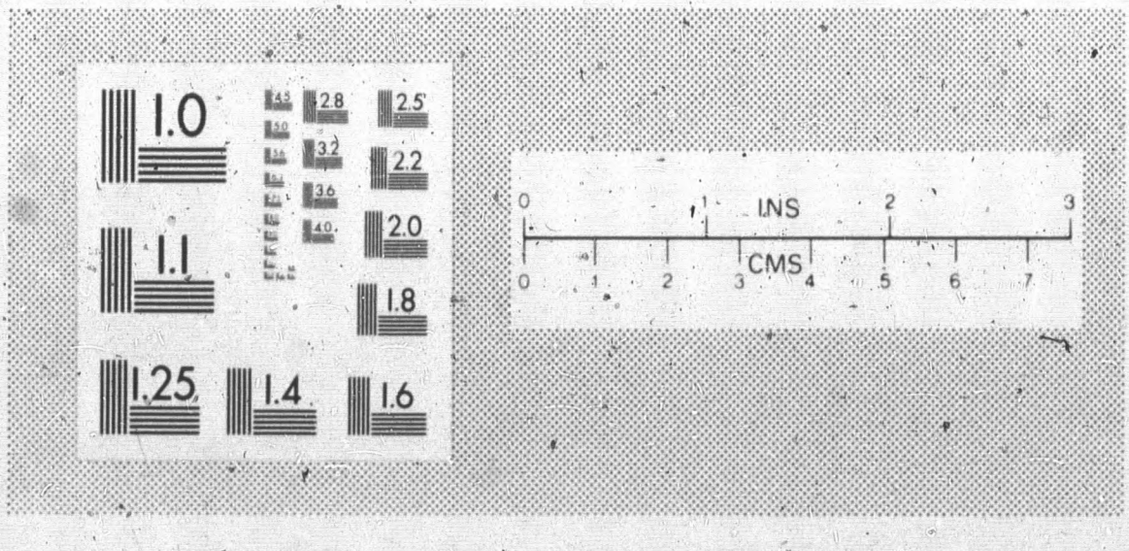

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LECTURES

ON

ARCHITECTURE

AND THE

DECORATIVE ARTS.

BY

OWEN JONES.

PRINTED FOR PRIVATE CIRCULATION.

1863.

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ON

THE INFLUENCE OF RELIGION UPON ART.

Mr. President and Gentlemen,

The subject which I propose to introduce for your consideration this evening, is a review of the several styles of architecture which have appeared in different ages—an endeavour to trace the close connexion which has always existed between them and the religious institutions of the countries which have given them birth, and to deduce from this some of the causes of the actual state of the science in the age in which we live.

In taking a rapid glance at the several nations on the globe which have from time to time occupied a page in history, and which have reached to any great degree of civilisation, it will be observed that they have each possessed religious institutions which have been coeval with their formation, and have vanished with their decline; which, totally distinct from similar institutions, either following or preceding them, aided by the climate and peculiar customs and manners of the several people, produced a series of styles of architecture which have

either totally varied from, or formed a connecting link with, those which had preceded them, in proportion as the religion of the one was inspired by, or more or less removed in its doctrines from, those of the other.

Succeeding ages have so entirely swept away many of these nations, that we have few traces left by which we may become acquainted with the state of religion amongst them, or of the arts which were the result; and too little is known of the history of others whose monuments are still handed down to us, to enable us to arrive at any idea approximate to truth. Of those vast empires, Babylon and Nineveh, not a stone remains; whilst the religions and arts of the Chinese and Hindoos are too much involved in mystery to enable us to prosecute our inquiry in those quarters with hopes of success; but we have still more than sufficient in the treasures afforded to us by the Egyptians, the Greeks, the Romans, the Christians, and the Moors, to enable us to trace, in the rise, progress, and decline of architecture amongst them, the inseparable connexion which has ever existed between it and their climates, manners, customs, and, above all, their religious institutions.

Egypt, by unanimous tradition, and the evidence afforded by the monuments which she has handed down to us, has generally been supposed to be the great parent of civilisation.

So favoured in its position; the people naturally inclined towards the practice and study of agriculture,

which required a knowledge and observation of the heavenly bodies, whose constant changes were found ever in unison with the birth, growth, and decay of the productions of the earth: and from the apparent connexion between the position of certain stars and planets, and the appearance of either scarcity or abundance, they were led to invest these bodies with power and influence over terrestrial things, and to consider them as God's dispensers of good and evil. As the wants and knowledge of the society increased, their religion became developed, and having admitted the *power* of the heavenly bodies, to which they had given names and attributes analogous to their own civil institutions, it became necessary to propitiate or entreat them, either as their influence was dreaded or their assistance required: hence the origin of altars, sacrifices, temples—temples which, even to the present day, evince the power of imagination, the *poesy* and religious faith, of the founders of so gigantic a system of theology.

Upon an examination of the monuments of Egypt, we feel the full force of the influence of religion upon them. Here, everything is symbolical and historical; the most simple of the numerous ornaments which decorate every corner of these buildings, and which appear only placed to fascinate the eye, are found upon a closer examination to contain historical facts, dates, or religious injunctions to the faithful. The walls of these most extraordinary of temples are found covered, internally and externally, with bas-reliefs, richly coloured,

relating to or explanatory of the Egyptian divinities of every order, their supposed genealogy and history; to the learned in hieroglyphics opening a view of their different functions and attributes, their various religious ceremonies, with all the instruments of worship. On the more public portions of these temples we may still read the complete history of the kings of the country and the details of the most remarkable events of its flourishing times; whilst on the tombs of the private individuals is found delineated a complete history of the arts, sciences, and commerce known to this extraordinary people. In fact, never has any style of architecture appeared so fully capable of handing down to posterity a complete chronicle of the manners, customs, and *feelings* of a people, so forcibly contrasted with the inexpressive styles which prevail in the present day.

It may not, perhaps, be out of place here to give a slight sketch of an Egyptian temple, as there may be many present unacquainted with some of its peculiar features.

The Egyptian temples were generally approached through sacred groves, by avenues of exquisitely-wrought sphinxes, varying in length from the relative position of the temple. In some cases, where the temple was situated near the banks of the Nile, with its axe perpendicular to the river, an avenue of sphinxes has led down to a kind of water-gate, where the sacred processions no doubt landed, most of the religious festivals taking place on the river, as the bas-reliefs of the

temples fully prove. The avenue of sphinxes between Karnac and Luxor is nearly one mile long.

On arriving in front of the temple, the attention of the observer is forcibly arrested by the colossal statues and obelisks of single pieces of granite, exquisitely worked, some of them 90 feet high, which guard the entrance to the temple, inviting the initiated only to enter. Behind these rises majestically the pylon, formed of two enormous masses, presenting a superficies of several hundred feet, completely covered by a representation of some historical event or scene connected with the Egyptian mythology. That of the temple of Luxor, which is the most remarkable from the state of its preservation and the peculiar beauty of its execution, represents a victory gained by Sesostris over an enemy of his country, supposed to be Persia. The centre of the picture on the left wing, which is the most animated, is occupied by a colossal figure of the royal conqueror, standing upright in a chariot drawn by two splendid horses in full gallop, in the act of launching an arrow from his extended bow. At his feet rushes forward a spirited lion, the constant companion of this greatest of the Pharaohs. The conqueror in his career crushes beneath the wheels of his chariot crowds of the enemy, and nothing can surpass the poetical composition of the *mêlée*, towards which the conqueror is directing the aim of his death-fraught arrows. Crowds rush headlong into the river, which surrounds the besieged fortress. Chariots without riders, horses and men in the agonies of death, some pierced with the

unerring instrument, look back with scorn on their destroyer; whilst others, yet unwounded, with their arms folded on their breasts, entreat the pity of this relentless conqueror. Every death-blow seems to have been struck by his own hand, his impetuous ardour having caused him to far outstrip the main body of his army.

On the opposite side of the river are seen parties of the enemy, assisting their unfortunate companions in their approach to land. To one, however, assistance seems to have arrived too late. He holds forth a feeble hand to his friends on shore, and falls back exhausted into the river. Not far distant is a group of two friends, who have abandoned all hope, and, locked in a friendly embrace, give themselves up to a watery grave. Some have been fortunate enough to ford the river, and are entering the town hastily, amidst the cries and lamentations of the besieged on the ramparts.

On the west wing the conqueror is seated on his throne, enjoying the cruel spectacle of the punishment of the captive chiefs; whilst behind him is represented the busy scene of a camp after victory—men and beasts bearing treasures, preparations for feasting, shoeing of horses, &c., with the lion of Sesostris, in a state of repose, guarding the camp.

Many of the groups of these immense pictures are beautifully executed, particularly a row of armed warriors in chariots, drawn by horses at full gallop, which have by many travellers been considered equal to the celebrated frieze of the Parthenon. Beneath these pictures are

pages of hieroglyphics, explanatory of the subject; and above we have the dedications to the gods in hieroglyphics, while the legends of the founder occupy the hollows of the cornice. We may still see the places where, on days of festivals or religious assembly, were placed against these noble piles high masts, perhaps 200 feet high, crowned with flags of glowing colours, which, towering high into the air, called the faithful from afar to come and worship.

Passing through the gateway of the propylon, where we have remained so long to admire the beautiful decorations of its walls, we enter an open court, varying in size. That of Luxor is 200 × 170, whilst that of the great temple of Karnac, added by the Ptolemies, is no less than 330 × 280.

A portico of two rows of columns surrounded this court, or, in some instances, colossal figures of kings, backed by pilasters; the walls covered with sculptured representations of the religious ceremonies of the Egyptians, which had taken place probably on the founding of the temple.

We pass now through another propylon into the great hall, divided into a nave and side-aisles; that of Karnac is 330 × 165. The enormous columns which support the nave are above 12 feet in diameter and 65 feet high. The greatest diameter of capital is 23 feet, thus nearly 70 feet in circumference. The walls of this hall are again covered with sculptured representations of mythological subjects; the columns are of the most

beautiful kind. The base is formed like the root of the papyrus, and the shaft of the column, although circular, still preserves the triangular form of the stalk, by three perpendicular lines, which divide the column into three equal parts. The capital is formed of the leaves of the lotus and papyrus combined, attached to the shaft by horizontal bands, and entwined with the leaves is written the name of the founder of the temple; whilst the cornices, architraves, &c., are completely covered with hieroglyphics, legends, and dedications to the immortal gods.

On the shaft of the several columns are representations of the king, founder of the temple, making offerings to the several divinities.* The observer is much struck with the arrangement of these pictures. From the pictures on the columns being placed parallel to the axe of the temple, the spectator, on entering, could only see a row of kings presenting offerings, as it would seem, to the gods at the altar at the extremity of the building, the rotundity of the columns preventing him from viewing the gods which formed a portion of each separate picture; whilst on his return a row of gods alone became visible, admirably adapted to keep up the feeling of piety in him who was permitted to pass the sacred threshold.

On leaving this hall we pass through another pro-

* This was first noticed by Champollion, whose researches in Egypt have done so much towards the acquirement of a perfect knowledge of this great country.

pylon, and enter the more secret parts of the temple, where, perhaps, alone the priests entered; here, as before, the walls, columns, ceilings, &c., are covered with mythological subjects, and descriptions of them in hieroglyphics, till we approach the altar at the extremity of the building, where are seated in solemn grandeur the gods to whose honour the temple was erected.*

Of the domestic architecture of the Egyptians we have but one example—the small pavilion which forms a portion of the palace of Medinet Haboo. It consisted of several floors, and the rooms were exceedingly small. The external walls of this palace appear to have been destined to impress the minds of the people with the respect due to their sovereign, who dwelt within. He is here represented as a colossal figure raising his sword upon a group of prisoners, which he has seized with

* That justly celebrated traveller, Mr. Hamilton, in describing the richness and grandeur of these temples, observes that it was in temples like these that the Egyptian priests lavished their treasures, and that the Jews first learned to make "the likeness of everything that was in heaven above, or in the earth beneath, or in the waters under the earth;" that they learned to bow down and worship their gods of silver and their gods of gold, which they could not help sighing after, even amidst the horrors of the desert. It was a recollection of this sensual fascinating worship that made all the people, at the command of Aaron, tear the earrings from their wives, their sons, and their daughters, with which he was to make the golden calf: and the impressions made by a residence of above 400 years were too strong to be entirely forgotten as long as they existed as a nation.

one hand by the hair of their head; whilst the balconies to the windows are supported by corbels of prisoners bent double, in the attitude of subjection. Once within, the scene changes, and we become acquainted with the private life of Rhamses. Here, in one apartment we see him taking his repast amidst the women of his harem; playing with his children; or occupied with his queen at a game of chess, who, at the same time that she places her pawn upon the board, presents a nosegay to her lord, that she may hereby distract his attention and win the game. Nothing can exceed the voluptuous, fascinating character of these paintings.

The traveller in Egypt is struck with the absence of any remains of the private dwellings of this great people. The one I have described is, I believe, the only example existing, and that was the residence of the sovereign. It may be taken as a great proof of the extent of the action of religion upon them, that whilst their faith enabled them to raise those splendid piles upon a scale so immense, that the mind of man of the present day is unable to cope with the conceptions of these giants of imagination—whilst the materials of the greatest bulk and most indestructible nature were sought for from afar to form the temples of their gods or the palaces of their kings, their own dwellings must have been made of materials so destructible that the successive inundations of the Nile have carried away every trace and confounded them with the soil. In the

tombs only—arising from their custom of the preservation of their dead,—this, too, deeply connected with their religion—do we find any instance of the rights of the private individual being preferred to those of the State. It was by means of the whole power, wealth, and art of the community being thus made to accumulate upon one point, that they were enabled to raise monuments in such numbers, one of which alone would defy all the potentates of Europe to execute.

If, however, the Egyptians were thus in the zenith of their power, they were far otherwise when, from a conquering, they became a conquered nation. The religion of Egypt under the Ptolemies lost the power which it had held under the Pharaohs; and although the conquerors, to ingratiate themselves with the people, undertook great works in rebuilding and restoring the temples, the hand that executed has told the tale of the want of that unity of faith which had before enabled them to execute with art such gigantic undertakings. Under the dominion of the Romans we find them descending still lower, their works, particularly painting and sculpture, exciting almost disgust.

But whilst the arts were thus on the decline in Egypt, transplanted to a foreign soil they continued to flourish; and we find amongst the Greeks art, unrestrained by the sacred laws so peculiar to the Egyptians, rising to its full development.

The religion of the Greeks was a modification of that of the Egyptians; so was also their architecture—

the types of its most characteristic features existing in Egypt long before that of Greece had arisen from a primitive state.

The religion of the Egyptians was in its origin purely spiritual and mystic, but in the course of time, long before it had passed to the Greeks—from the worshipping of all animated nature, the air, the stars, the sun, the moon, &c., which they represented by certain forms of men, animals, &c.—they passed from the adoration of the thing signified to the thing itself, unmindful of the allegory which had called their divinities into existence. Hence the religion of the Greeks was purely material: so also was their architecture. "Feelingly alive to all the bounteous gifts of nature, they embodied them in their art." Conceiving gods in the image of men, they made men like gods. Here, however, the face of nature, so different from that of the flat country of the Nile, induced a complete revolution in art. The eye, accustomed to wander over the sharp angles and accidental curves of the vast mountains of this favoured soil, inspired an architecture in complete sympathy with its character. In Egypt, where Nature had shown her solemn grandeurs under forms more calm, the mind of man was enabled to expand and make up for the absence of the *grandiose* in Nature's works by the buildings which he raised upon her soil.

Not so Greece. There the grander features of Nature's countenance awed man into respect for her won-

drous charms, which, however, by his fertile genius he was enabled to make use of, but could not rival; for we here see the temples of the gods perched upon the mountain-top, which formed its pedestal, seeming to add a delicate finish to the highly-wrought works of nature; not, as in modern times, so basely prostituted as to be made in crowded cities to represent with equal propriety a Christian church, a theatre of pleasure, or an hospital for sick.

But if the religion of the Egyptians in the hands of the Greeks lost a portion of its character, with the Romans it became almost powerless; possessing the outward forms and ceremonies of worship, but not the inward faith, they erected temples upon a grander and more extravagant scale, but wanting in the feeling, that exquisite taste, that sympathy with their mythology, which so distinguished the Greeks and Egyptians. Having attained an almost boundless power on the earth, they began to set themselves up as gods, to the neglect of those which had been handed down to them by their forefathers. The real religion of the Romans, or tie which bound all men together, moving sympathetically round one centre, was glory, conquest, luxury. Hence the monuments which the Romans have handed down to us, as the true chronicle of their times, are the Coliseum, the baths, theatres, palaces, triumphal arches, —these, and these only, can lay claim to originality of invention.

But the religion of the Egyptians, which, through

successive ages in undergoing various transformations, had at last consumed away and died, was chased for ever from the remembrance of mankind by the appearance of a new faith sweeping across the earth, bearing with it the stamp of a direct revelation from the Divine Creator: rising in an age which had sunk into the lowest depths of materialism, it came forth in virgin purity, divested of all the baser particles of human nature. This caused a new era in art.

The Christian religion, as unlike any of the preceding ones as it was superior to them, produced *an art* equally distinct. Although many of the works of art which were the result of this religion, though not inspired by it, being erected in a country where Paganism has never been thoroughly effaced, resembled also its works. This is easily accounted for by the vast remains of heathen temples, basilicas, which were found ready made for the worship of the Christian; and in the buildings afterwards erected in the same climes the people could never throw aside the shackles imposed upon them by the style of those with which they had grown up, and in which, as Pagans, they had worshipped. Whilst in the colder climates of the north, beyond the circle of the influence of Paganism, having no longer before them the works of other times, the results of other systems, the Christian, devoutly studying the character of the God, a temple to whose worship he was about to raise, inspired solely by the feelings of spiritualism of which that worship was composed,

produced an art which has little to fear in comparison with any that had appeared before it. It would be quite needless here for me to trace the sympathy which exists between the Gothic cathedral and the Christian religion—it is too powerfully felt by all to need a comment.

But whilst the Christian religion was taking root in the northern climes, and strewing the earth with vegetation, it was gradually being expelled from the East, its birth-place. Appearing, as we have before remarked, at a period when the Eastern nations were grovelling in materialism, introducing doctrines which overthrew all the vanities of the world, for which the people of the East had ever been remarkable, a great reaction took place. Christianity fled to hearts more sympathetic, whilst the nations of the East rallied round the standard of a supposed prophet, who carried them back under other forms to the materialism of their forefathers. But its doctrines and faith resembled in many instances that of the Christian: so did also its architecture. Thus they both worshipped one God; both had a dread of idolatry; and it is a singular fact, that Mahomedanism is less subject to this last reproach than have been the followers of Christ.

This dread of idolatry caused a singular feature in the architecture of the Mahomedans. Forbidden by their creed to introduce in any way representations of the human form, the law did not apply to the other offsprings of nature. Whilst in Egypt, besides the human

figure, we find representations of the whole animal and vegetable world—in Greece the acanthus, and among the Christians the oak-leaf and the vine—we find the temples of the Arabs decorated throughout as none others have been, unaided by the productions of nature, which they have copied, if at all, in a manner so distant, so changed by the fertility of their imagination, that we are quite at a loss to discover the traces of the originals. It would seem rather that the Arabs, changing their wandering for a settled life, *in striking the tent to plant it in a form more solid*, had transferred the luxurious shawls and hangings of Cashmere, which had adorned their former dwellings, to their new; changing the tent-pole for a marble column, and the silken tissue for gilded plaster: whilst in their temples the doctrine of the Koran, written on every side, proclaiming the power of God, and impressing upon the believer respect for the laws and the love of virtue, produced a species of decoration as original as it was magical in effect.

We observe, however, in the architecture of the Mahomedans the same anomaly which we have before seen in that of the Christians. Wherever the Mahomedans invaded and conquered Christian nations, drove them from the soil, occupied their temples, and consecrated them to their own god, we find that all subsequent buildings erected in the same climes have felt the influence of those already adapted to the new worship. Thus, as in the Christian religion we look for

the art which she inspired in the countries of the North, and not in Italy, where she first found footing in Europe; so we must not look for that of Mahomet in Constantinople, but in countries where the Arabs, not finding the Byzantine churches ready to their hands, were left to the full play of their imaginations, and produced the most fanciful and voluptuous of all kinds of art, as well as the most faithful to their religious principles.

The art of the Mahomedan, once so powerful, still accompanies its religion in a lingering death; crushed by the rapid strides which surrounding nations have made in the progress of civilisation, and which have outrun and ruined it, yet do a few bright sparks sometimes appear amongst them, to show that, as in religion they are still faithful to their creed, although that faith is weakened, so in art, once so powerful, do they still preserve a shattered remnant of their own.

Far otherwise is it in Christian countries: the Reformation, by separating the tie which had ever existed between religion and art, was a deathblow to religious architecture. Destroying the unity of the Christian religion, creating almost as many different sects and divisions as there are individual followers of Christ, at the same time that she purified religion by returning to the fountain-head, yet leaving every man to be his own interpreter of its hidden mysteries, its moral duties and obligations, she destroyed for ever that unity of action of faith, now called superstition, which caused our fore-

fathers to erect such splendid piles. Each man feeling his religion in a different way, has expressed it differently, or has more frequently shown that the tie which connected religion and art has been for ever severed. It is thus we see the emblems of sacrifices from Grecian altars and monuments erected by a Pagan, to carry a tripod won at the Olympian games, serve as a *Bell-tower* to call the Christian to the worship of his God. I need not multiply instances of this kind; you are all too well acquainted with these violations of good taste, feeling, and religion.

Who, I would ask, that has wandered amidst the splendid works that Egypt, our great parent, has handed down to us, has not felt how beautifully architecture is there the expression of an allegorical mythology, vast, stupendous as the system on which it was founded? Who that has stood beside the fountain of the Mosque of Sultan Hassan in Grand Cairo, or has trod the golden halls of the fairy palace of the Alhambra, has not felt the calm, voluptuous translation of the Koran's doctrines? Who, amidst the aisles of a Gothic cathedral, has not felt materialism wither away, and, awe-struck by the mysterious character of the building, cried out,—Here, indeed, is the dwelling-place of the Christian's God! here may He be worshipped in purity of spirit? Who, once more I would ask, has attended the evening service of a Reformed Protestant Church, erected, perhaps, under the superintendence of Commissioners appointed for the express

purpose of watching over the appropriateness of the building for the object it was intended to fulfil, with every attention paid to the comforts of the creature and so little to the glory of the Creator in whose dwelling-place he is supposed to be; and has not had a feeling of regret and sorrow steal over him on viewing the evidences of wealth and luxury which surrounded him, to see so much was given to man, so little to God?

Was it thus the early Christians worshipped Him? was it thus that all those splendid monuments of the Christian faith of our forefathers were erected and endowed? True, perhaps, there exist more virtue, more morality, under the Reformation. God is more truly served in churches, externally a heathen temple and internally a theatre. Yet is this entirely owing to the excellence of the doctrine itself; for, most certainly, the character of the building is but little calculated to impress the minds of the congregation, or to prepare the ground for the sowing of the seed. It might be advanced with some truth, that a building raised by mortal hands, is not needed by a God whose temple is all space; that the religion of Christ, addressing itself to the reason, requires not the assistance of an agent upon the imagination. Sincere homage, whenever or wherever offered, is doubtless always acceptable to God; yet may we suppose the Divine Creator not altogether unmindful of the fruit by which the tree is known. In fact, the injunctions given to Solomon for the building of the

Temple prove the contrary. But so great an indifference exists among the Protestant community for architectural consistency, that although their own doctrines teach them that their temples should possess no power over the imagination, yet have they invested them with a dangerous rather than a soothing character.

But, if the Reformation have destroyed religious architecture, and the chain which held society linked together, there has arisen upon its ruins a religion more powerful, whose works equal, nay, surpass all that the Egyptians, Greeks, or Romans had ever conceived. Mammon is the god; Industry and Commerce are the high-priests. Void of poesy, of feeling, or of faith, they have abandoned Art for her bolder sister Science. And as among the Egyptians, the Greeks, the Catholics, and the Moors, historians may still see the chronicle of the times written in deep characters upon their temples,—that of the Romans in the works of an overgrown luxury and thirst for conquest,—so, when this age shall have passed away, all the works which shall result from the triumvirate, Science, Commerce, and Industry, to the utter exclusion of those of Art, shall be handed down to posterity to raise us in the scale of departed nations.

Gentlemen, I cannot help here expressing the pleasure which I experienced on my return from wandering amidst the monuments of antiquity, where these ideas were formed, and where, in admiring the results of the most noble science of Architecture in other climes,

I could not but regret its misapplication in my own—the pleasure I experienced in finding that others in my absence had been most successfully employed in forming a School of Architecture, which, I doubt not, will eventually raise that art from the desponding condition in which it has been long plunged. I hailed with pleasure the first dawn of a great change in the uprising of the Architectural Society, and sought with eagerness the honour of participating in its labours.

I would now, therefore, be allowed, in conclusion to this Essay, to make a few suggestions upon the course which we should steer to keep clear of the shoals and sandbanks which beset, on all sides, our entrance into the harbour.

The Protestant religion, no longer requiring in its temples the assistance of architecture, its study would avail us little towards the development of a new style. But, as we have attempted to show that the great works of the age are the result of *science* only, I think we should endeavour to connect ourselves more closely with it to receive knowledge and afford art. Thus, to make my meaning more clear: the use of cast-iron in buildings is constantly applied with science, but never with art. We seem ashamed of the material employed; it must be cased, made to represent what it is not. Thus we fear to admit the employment of a column six inches diameter, and must case it with one of four feet; making it appear a heavy Doric column of stone. Every other architecture has always endeavoured to be most scru-

pulously true; and its changes have been almost as much influenced in the different countries by the materials which could be procured, as by religion itself. Why, then, should we refuse to recognise the great change which reveals itself in architecture, by the employment of materials hitherto unknown?

It is quite evident, that if we resist the indolent temptation of imitating the genius of others, invention must result. Thus, if we leave the six-inch column in its place, we cannot consistently give it the base and capital which we had intended for its casing of four feet, and must, therefore, imagine something to supply its place. As in the columns throughout, as it is with cast-iron, so it is with every other method of scientific construction, unknown to former ages. Had the ancients been acquainted with the use of cast-iron and the principles of modern construction, how different would have been their architecture! Why, then, should we, possessing these advantages, throw aside a powerful arm, to leave ourselves defenceless? Why refuse to follow the example which painting and sculpture have set before us? Do we not admire, in the works of a Wilkie or a Landseer, the poetical expression of our own times? Does not the Little Corporal on the column of the Place Vendôme in Paris, excite in us more sympathy than did the Roman Emperor which it has displaced? And did I not fear to excite a smile within you, I would venture to call your attention to the shop of a blacking-merchant in the neighbourhood of Temple Bar, which

you have all undoubtedly seen, but certainly never admired. The façade is a composition of boots and blacking-bottles; and although the composer, in attempting the sublime, has unfortunately fallen into the ridiculous, he no less deserves the credit of having felt the true principles which actuated the Greeks and Egyptians, as we are still enabled to trace in the tombs of the one or the dwellings of the other the temporary or eternal home of the humblest artisan; whilst in modern times a building, which on a first view appears to be the palace of a prince, on a closer inspection is found to contain linen and broadcloth.

But I fear I have trespassed too long and too unworthily upon your time and attention, and cannot but regret that important occupations at the present moment have prevented my devoting that attention which this Essay required, to do justice to you, the subject, and myself. Should I, however, have succeeded in creating amongst you such a desire of inquiry into the justness of my observations as may induce any of you to prosecute this subject more fully and more worthily, I shall not regret the hazard which has thrown me this evening before you, to occupy the place of a more worthy member, who would have offered you more instruction or afforded you more pleasure.

LONDON:
STRANGEWAYS AND WALDEN, PRINTERS,
28 Castle St. Leicester Sq.

ON THE DECORATIONS PROPOSED FOR THE EXHIBITION BUILDING IN HYDE PARK.

READ AT THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

DECEMBER 16, 1850.

ON THE DECORATIONS,

&c. &c.

I PROPOSE to offer this evening some observations on the mode of painting, which I have recommended for the interior of the Great Exhibition Building in Hyde Park; and, as the specimen I have already had executed there has excited some attention from my professional brethren, and has moreover, in some quarters, met with very severe censure, I will lay before this meeting the motives, which guided me in the selection of the manner of colouring I have suggested, and explain the principles on which I act in carrying out that system in detail.

I am in the position of a surgeon about to perform a difficult operation, to whom it has been objected, that he will kill his patient from want of skill, and who therefore invites objectors to come forward, whilst the patient yet lives, not with vague prophecies of failure, but with advice to show how failure may be best avoided.

No one can hope to obtain the universal acceptance of his views on any subject, especially on one so unsettled among us as that of decoration:—what pleases one person will be distasteful to another; yet, as truth is always truth, however different minds may receive it with different impressions, if I can but arrive at an approximation to true principles in the decoration I propose, I may hope to obtain the approval of the greater number of my professional brethren, and I must bear, as best I may, the disapprobation of the rest.

The mass of mankind can hardly be supposed insensible to the beauty of colour, which Nature distributes over the earth so lavishly; yet it is certain, that, as there are many persons who have no ear for music, so there are others who have no eye for colour; there are others, again, who sing out of tune, or see colours falsely. As some may sing or play without any knowledge of music, so others may colour well by natural instinct; but study and cultivation will, nevertheless, improve both the eye and the ear.

Of late years, the employment and the appreciation of colour have made most rapid strides throughout Europe, but England has remained far behind; a circumstance which is the more remarkable, as her painters have long been renowned as colourists:—the fault lies, I fear, with ourselves; we have too long neglected this essential portion of an architect's studies and practice. The interiors of our houses have been given over to the upholsterer and the decorator, many of whom are men

of great taste and talent, I admit; but, still we must regret, that architects have not directed more of their skill and learning to this subject, and been prepared to lead, rather than to follow. We are only now beginning to shake off the trammels, which the last age of universal whitewashing has left us, when everything but pure white was considered universally (and indeed is still held by many) to be wanting in good taste. The evidences of colour on the monuments of Greece were first stoutly denied, and then, when proved to exist, they were supposed to be the works of barbarous after-ages; and even when this last position was no longer tenable, it was said that the ancients, though perfect masters of form, were ignorant of colour, or that they, at any rate, had misapplied it. Men were reluctant to give up their long-cherished idea of the white marble of the Parthenon, and of the simplicity of its forms, and they refused to regard it as a building, coloured in every part, and covered with a most elaborate system of ornamentation. The architecture of our fine Gothic cathedrals has lost half its beauty from the absence of colour; he who, without prejudice, sees for the first time a Gothic building picked out in colour, will be forced to admit, that until then he had not understood or appreciated Gothic architecture, many of the geometrical forms and combinations of which depend entirely on colour for their full development. We are too apt to consider that which we find established around us as right, but, however deep-rooted the Puritan prejudices

against colour may have been, we are fast shaking them off; and, when we do completely so, there is no reason to fear that England will be behind other nations in the race of improvement, as she may, we trust, retrieve by the increased energy, industry, and superior perseverance of her sons, when once earnestly set to work, the time lost in the commencement of the struggle. Those who go first will probably fail, but, as in the storming of a fortress the ramparts are at last reached over the dead bodies of the "forlorn hope," so will the mistakes of those who lead the way in coloured architecture, contribute to the success of those who follow.

It is not necessary for me to describe the building, the painting of which we are now about to discuss, as it is well known to most of you by its marvellous dimensions, the simplicity of its construction, and the advantage which has been taken of the power, which the repetition of simple forms will give in producing grandeur of effect; and I wish now to show, that this grandeur may be still further enhanced by a system of colouring, which, by marking *distinctly* every line in the building, will increase the height, the length, and the bulk.

The very nature of the material of which this building is mainly constructed, viz. iron, requires that it should be painted. On what principle shall we do this? Should we be justified in adopting a simple tint of white or stone colour, the usual method of painting iron. Now, it must be borne in mind, that this building will

be covered on the south side, and over the whole of the roof, with canvass, so that there can be but little light and shade. The myriads of similar lines, therefore, of which the building is composed, falling one before the other, would lose all distinctness, and form, in fact, one dull cloud overhanging the exhibition. A line of columns (as it may be seen even now at the building) would present the effect of a white wall, and it would be impossible, in the distance, to distinguish one column from another; this mode of painting would have the further disadvantage of rendering the building totally unconnected with the various objects it is destined to contain. May the building be painted of a dark colour, like the roofs of some of our railway stations? this, equally with the white method, would present one mass of indistinctness, the relief of the cast iron would disappear, and each column and girder would present to the eye but a flat silhouette.

Let us now consider the building as painted with some pale neutral tint, dull green or buff. In doing this we should be perfectly safe, as, provided the colours were not too pale so as to be indistinct, or too dark so as sensibly to affect the eye, we could hardly make a mistake. Yet, how tame and monotonous would be the result! it would be necessary that this tint, whichever we might choose, should be of a very subdued neutral character, in order to avoid the difficulty well known to mounters of drawings and painters of picture galleries, viz. that in proportion as you incline to any

particular shade of colour, so in that exact proportion you injure or destroy those objects it is intended to relieve, which may have similar colour. To this then should we be reduced—a dull monotonous colour without character—how unworthy would this be of the great occasion! how little would it impress the public! how little would it teach the artist!—it would be to cut, instead of patiently to unravel the knot.

We are now brought to the consideration of the only other well-defined system which presents itself, viz. parti-colouring. This, I conceive, if successfully carried out, would bring the building and its contents into perfect harmony, and it would fitly carry out one of the objects for which this exhibition was formed, viz. that of promoting the union of the fine arts with manufactures. It would be an experiment on an immense scale, which, if successful, would tend to dispel the prejudices of those whose eyes are yet unformed to colour, to develop the imperfect appreciations of others, and to save this country from the reproach, which foreign visitors, more educated in this particular than ourselves, would not fail to make were the building otherwise painted; it would everywhere bring out the construction of the building, which, as I said before, would also appear higher, longer, and more solid.

To produce this result, it is essential not to make a mistake: parti-colouring may become the most vulgar, as it may be the most beautiful of objects; it is necessary therefore to proceed with great caution; to calcu-

late the effect of every step; not to be misled by the appearance of any one portion of the building, but to bear in mind always the effect the building will have when complete and furnished. I have not shrunk from treading a path beset with so many difficulties, and I willingly appear before you this evening to meet your criticisms, and to weigh any opinions, which the experience of my brother architects may suggest.

If we examine the remains of the architecture of the ancients, we shall find everywhere, that in the early periods the prevailing colours used in decoration were the "primaries," blue, red, and yellow, the "secondaries" appearing very sparingly. We find this to be the case equally in the remains of Nineveh, of Central America, of Egypt, and of Greece, and throughout the vestiges of Eastern civilisation generally. We find also everywhere, that, as time wore on, the secondary colours invaded the dominion of the primaries, and blue and red were supplanted by green and purple. In Egypt, in the temples built by the Pharaohs, blue, red, and yellow mainly prevail, whilst in those built by the Ptolemies, the green and purples take their place. In those of the Roman period, colours are still further degraded to a dull and incongruous muddiness. In the Greek temples, as far as we can gather from the few remains of colour, the same law prevails, whilst in Pompeii, we find the secondaries and tertiaries to be the ruling harmonies.

In the Alhambra, the blue and red of the Moors

were painted over with green and purple by Charles V. and his successors, and with the worst effect. In modern Cairo, and in the East generally, we have green constantly appearing side by side with red, where blue would have been used in earlier times.

It is equally true of the works of the middle ages, in the early manuscripts, and in the stained glass, though other colours were not excluded, yet the primaries were chiefly used, whilst, in later times, we have every variety of shade and tint, but rarely used with equal success.

It would seem either, that the human mind, ever seeking for change, became weary of the simple harmonies which the primaries afforded, and sought more complicated effects from the secondaries and tertiaries, or, that this change arose from the decline of art, and the incapacity of artists to deal with the primary colours in their pure state, which caused them to take refuge in the use of the secondaries and tertiaries, in which error in the balance of colour was less fatal, although to produce perfect harmony with the secondaries and tertiaries, is, no doubt, much more difficult.

Among modern examples of the use of colour, we may cite the Royal Chapel of Munich, where blue, red, and gold form the principal harmonies, as being far superior to the other churches of the same city, where the secondary and tertiary colours prevail; at Paris, in the Church of St. Vincent de Paul, which is decidedly the most perfect specimen of modern decoration in any

country, the colours are blue, red, and gold, separated by white; the decorations in this church contrast admirably with those in St. Denis, St. Germain des Prés, and other churches of Paris, in which the secondaries and tertiaries prevail.

When, in the best periods, the secondary colours were used in conjunction with the primaries, they were generally confined to the lower parts of the building, the artists following in this respect Nature, who uses the primary colours for her flowers, and reserves the secondaries for her leaves and stalks.

In the decoration of the Exhibition building, I therefore propose to use the colours blue, red, and yellow, in such relative quantities, as to neutralise or destroy each other; thus no *one* colour will be dominant or fatiguing to the eye, and all the objects exhibited will assist, and be assisted by, the colours of the building itself.

In house decoration, we occasionally find a run upon one colour; thus we have a green room, a pink room, and a red room; but it would obviously be unwise to adopt any one colour for this building, whose contents will be of all imaginable hues from white to black; discarding on the other hand, the perfect neutral white as unfit for the occasion, we naturally adopt the colours blue, red, and yellow, in or near the neutral proportions of 8, 5, and 3; but, to avoid any harsh antagonism of the primary colours when in contact, or any undesired complementary secondaries arising from the immediate

proximity of the primaries, I propose, in all cases, to interpose a line of white between them, which will soften them and give them their true value.

It is well known, that if blue and red should be placed together without the interposition of white, they would each become tinged with the complementary colour of the other; thus, the red would become slightly orange, and the blue slightly green. As all coloured bodies reflect some white rays, the white in juxtaposition extinguishes these white rays by its superior force, and we see the colours purer, while at the same time the white becomes tinged with the complementary colour of that against which it is placed, and thus further heightens its effect.

As one of the objects of decorating a building is to increase the effect of light and shade, the best means of using blue, red, and yellow, is to place blue, which retires, on the concave surfaces, yellow, which advances, on the convex, and red, the colour of the middle distance, on the horizontal planes, and the neutral white on the vertical planes. Following out this principle on the building in question, we have red for the underside of the girders, yellow on the round portions of the columns, and blue in the hollow parts of the capitals.

Now, it is necessary not only to put the several colours in the right places, but also to use them in their due proportions to each other.

Mr. Field, in his admirable works on colour, has shown by direct experiment that white light consists of

blue, red, and yellow, neutralising each other, in the proportions of 8, 5, and 3. It will readily be seen, that the nearer we can arrive at this state of neutrality, the more harmonious and light-giving will a building become, and an examination of the most perfect specimens of harmonious colouring of the ancients will show, that this proportion has generally obtained among them; that is to say broadly, there has been as much blue as the yellow and red put together, the light and the shade balancing each other.

Of course, we cannot in decorating buildings always command the exact proportions of coloured surface which we require, but the balance of colours can always be obtained by a change in the colours themselves; thus, if the surfaces to be coloured should give too much yellow, we should make the red more crimson, and the blue more purple; that is, we should take the yellow out of them; so, if we had too much blue, we should make the yellow more orange, and the red more scarlet.

A practised eye will as readily do this as a musician can tune a musical instrument; it is here that science abandons the artist, who must trust to his own perceptions, cultivated by renewed trials and repeated failures. In the present instance, I must do this in the presence of the world at large; in *ordinary* cases, the architect may shut up his building till it is complete, *here* the public will watch every proceeding from the first to the last. It is on this account that I invite you to suspend your judgment; and I beg of those, who have already

seen the specimen at the Building, or who may see the work in its progress, to banish constantly from their minds the objects by which it is now surrounded. It must be evident to all, that a yellow and blue column will appear very differently when seen with a carpet or other hangings for a background, from what it does *now* with a background of deal boards, and a foreground of carpenters' benches. This I had the honour of pointing out to the Royal Commissioners, by suspending a series of carpets at a distance of 24 feet from the columns; when the yellow and blue column stood out clear and solid, whilst in the red column the red fell back to the level of the reds and brown in the carpets, and the column lost its brightness and solidity. I may as well mention that this red column, which has been the subject of some misapprehension, *never* formed any part of my plan. I only had it painted in obedience to the wishes of some critics, who thought it would be preferred to the yellow and blue column, but, as it was coloured in direct violation of the principle which I had laid down as the basis of my operations, I *knew* that it would not do, and that the event has proved. The column coloured green, in front of the carpets, lost all form, and might as well have been of the ordinary round section, as all the advantage to be derived from its beautiful shape, adopted at the recommendation of Mr. Barry, was entirely destroyed.

I would ask you to banish from your minds the glare of light by which this decoration is now seen; to

forget the rough foreground, where men are engaged in every variety of occupation for the completion of this great building; and I would ask you to fill it, in imagination, with the gorgeous products of every clime. I would ask you to picture to yourselves in the foreground the brilliant primaries, blue, red, and yellow, the rich secondaries, purple, amber, and green, moulded in forms of every conceivable diversity, and lastly, against them, the darker tertiaries fading into neutral perspective.

The conception of such an effect, difficult even to the artist accustomed to abstract his attention from present interruptions, and to calculate future harmonies, is impossible to the uninstructed spectator, who, from the experimental decoration of a *single* column, draws a premature, and, necessarily, a fallacious inference as to the collective effect of the whole. From my brother architects, I hope for a more patient, a more comprehensive, and a fairer appreciation;—for myself, I have a confident hope,—grounded on the experience of years devoted to this particular branch of art, that the principles and plans I have had the honour to propose to the Royal Commission, for the decoration of this magnificent structure, will be found, when complete, not to disappoint the public expectation, or to prove wholly unworthy of the great occasion.

AN ATTEMPT TO DEFINE THE PRINCIPLES WHICH SHOULD REGULATE THE EMPLOYMENT OF COLOUR IN THE DECORATIVE ARTS.

READ BEFORE THE SOCIETY OF ARTS,

APRIL 28, 1852.

AN ATTEMPT TO DEFINE,

&c. &c.

It can scarcely too often be repeated, that amongst the many advantages which must result to England from the gathering of the products of the world's industry in the Great Exhibition, no one is so prominent as that we have thereby learned wherein we were deficient; and although we may gather from the Lectures which have already been delivered before this Society a high idea of the power, wealth, and industry of this great country; of the untiring enterprise which gathers from a distance the products of every clime; of the persevering industry which makes them available to the wants of man; and may further witness the constant struggle to utilise every gift of Nature, till truly it may be said, nothing has been made in vain; yet, side by side with success, we have seen much of labour wasted, much knowledge

imperfect, much energy misapplied: and when we leave the field of Science and Industry and turn to Art, we have to learn from the Great Exhibition a fruitful lesson; from leading the van in the march of progress, we must fall into the rear, and suffer to pass before us nations whose efforts we have hitherto but imperfectly appreciated.

In that branch of art, the employment of colour, the more immediate subject of this lecture, we were not only behind some of our European neighbours, but, in common with these, were far outstripped by the nations of the East. Let us endeavour to trace the cause of this, and, if possible, discover the principles which in their case have led to so signal a success.

As architecture is the great parent of all ornamentation, it is from the study of architectural monuments that we shall best obtain a knowledge of the principles which govern the employment of ornament and of colour generally.

In all ages but our own, the same ornaments, the same system of colouring, which prevailed upon their buildings, pervaded all they did, even to their humblest utensils: the ornaments on a mummy-case are analogous with those of the Egyptian temple; the painted vases of the Greeks are but the reflex of the paintings of their temples; the beautiful cushions and slippers of Morocco of the present day are adorned with similar ornaments, having the same colours, as are to be found on the walls of the Alhambra.

It is far different with ourselves. We have no principles, no unity; the architect, the upholsterer, the paper-stainer, the weaver, the calico-printer, and the potter, run each their independent course; each struggles fruitlessly, each produces in art novelty without beauty, or beauty without intelligence.

The architect, the natural head and chief of all who minister to the comforts and adornments of our homes, has abdicated his high office; he has been content to form the skeleton which it should also have been his task to clothe, and has relinquished to inferior and unguided hands the delicate modelling of the tissues and the varied colouring of the surface: who can wonder at the discordance and incongruity of the result?

Until very recently the employment of colour on buildings has had but few advocates in this country; we are still imbued with the prejudices left us by our immediate ancestors and developed in our early education.

Although we now know that many of the monuments of antiquity were entirely covered with colour and ornament, while of others we have evidence that they were partially painted, and are further bound to conclude that they were entirely so, yet this is still disputed, and not long since the Royal Institute of British Architects were unable to vanquish this prejudice amongst their own body; and it remains to this day with them, alas! a disputed question, to what extent the monuments of Greece were coloured.

There are artists more willing to believe that the

Greeks were imperfectly organised for the appreciation of colour, and consequently misapplied it, than that the defect can lie with ourselves, and our imperfect knowledge of what they did and why they did it.

I will ask you to believe that the stupendous monuments of the Egyptians, the Greeks, the Arabs, and other Eastern civilisations, with the nearer to us Gothic buildings of our own forefathers, were not in vain covered with a most elaborate system of ornamentation requiring colour for its development, but rather, in obedience to a patient observation of Nature's works, where we find everywhere colour assisting in the development of form and adding many charms which but for this were wanting.

In asking you to watch the means by which these additional charms were given, I do not wish you to understand that what the ancients did we should now repeat, but should follow them only so far as we find they acted on principles by them universally recognised and running through all time, and which we may now presume to be discovered truths, and therefore not wisely to be rejected.

As I have elsewhere said:— *

"He who should set about forming a new style for "himself without regard to the past, would be like a "student in astronomy who should reject the discoveries "of Newton and endeavour to work out every process

* "Journal of Design" for June, 1851.

"for himself. Yet, on the other hand, where would the "science of astronomy be now, if successive students "had been content to receive the discoveries of Newton "as final truths, instead of employing them as the "basis of fresh researches?"

The successful labours of past ages are our inheritance, and should not be rashly squandered or unprofitably hoarded: we should not be content blindly to follow any in their steps, but rather endeavour to go forward, patiently working out the great principles which the experience and practice of successive ages have evolved.

Regarding our present subject from this point of view, I have put together a series of Rules, which I believe are axioms, but which we will call "Proposi-"tions." They will be found, I trust, available and safe guides in the employment of colour in the Decorative Arts.

Some are derived from the observation of the works of Nature; others are the teachings of Science; others, again, gathered from the practice of all those nations who have carried the Decorative Arts to the highest perfection.

They are as follows:—

Proposition 1.

Colour is used to assist in the development of form, and to distinguish objects or parts of objects one from another.

Proposition 2.

Colour is used to assist light and shade, helping the undulations of form by the proper distribution of the several colours.

Proposition 3.

These objects are best attained by the use of the primary colours on small surfaces and in small quantities, balanced and supported by the secondary and tertiary colours on the larger masses.

Proposition 4.

The primary colours should be used on the upper portions of objects, the secondary and tertiary on the lower.

Proposition 5.

Field's Chromatic equivalents.

The primaries of equal intensities will harmonise or neutralise each other, in the proportions of 3 yellow, 5 red, and 8 blue,—integrally as 16.

The secondaries, in the proportion of 8 orange, 13 purple, 11 green,—integrally as 32.

The tertiaries, citrine (*compound of orange and green*), 19; russet (*orange and purple*), 21; olive (*green and purple*), 24;—integrally as 64.

It follows that,—

Each secondary being a compound of two primaries, is neutralised by the remaining primary in

the same proportions,—thus, 8 of orange by 8 of blue, 11 of green by 5 of red, 13 of purple by 3 of yellow.

Each tertiary being a binary compound of two secondaries, is neutralised by the remaining secondary, —as 24 of olive by 8 of orange, 21 of russet by 11 of green, 19 of citrine by 13 of purple.

Proposition 6.

The above supposes the colours to be used in their prismatic intensities, but each colour has a variety of tones when mixed with white, or of shades when mixed with grey or black.

When a full colour is contrasted with another of a lower tone, the volume of the latter must be proportionally increased.

Proposition 7.

Each colour has a variety of hues, obtained by admixture with other colours, in addition to white, grey, or black: thus we have of yellow,—orange-yellow on the one side, and lemon-yellow on the other; so of red,—scarlet-red, and crimson-red; and of each every variety of tone and shade.

When a primary tinged with another primary is contrasted with a secondary, the secondary must have a hue of the third primary.

Proposition 8.

In using the primary colours on moulded surfaces,

we should place blue, which retires, on the concave surfaces; yellow, which advances, on the convex; and red, the intermediate colour, on the undersides; separating the colours by white on the vertical planes.

When the proportions required by Proposition 5 cannot be obtained, we may procure the balance by a change in the colours themselves: thus, if the surfaces to be coloured should give too much yellow, we should make the red more crimson and the blue more purple,—*i.e.* we should take the yellow out of them; so if the surfaces should give too much blue, we should make the yellow more orange and the red more scarlet.

Proposition 9.

The various colours should be so blended that the objects coloured, when viewed at a distance, should present a neutralised bloom.

Proposition 10.

No composition can be perfect in which any one of the three primary colours is wanting.

Proposition 11.

Chevreul's Law of the Simultaneous Contrast of Colours.

When two tones of the same colour are juxtaposed, the light colour will appear lighter, and the dark colour darker.

Proposition 12.

When two different colours are juxtaposed, they receive a double modification,—first, as to their tone

(the light colour appearing lighter and the dark colour appearing darker); secondly, as to their hue, each will become tinged with the complimentary colour of the other. Chevreul's Law of the Simultaneous Contrast of Colours.

PROPOSITION 13.

Colours on white grounds appear darker; on black grounds, lighter.

PROPOSITION 14.

Black grounds suffer when opposed to colours which give a luminous complimentary.

PROPOSITION 15.

When ornaments in a colour are on a ground of a contrasting colour, the ornament should be separated from the ground by an edging of lighter colour,—as a red flower on a green ground should have an edging of lighter red.

PROPOSITION 16.

When ornaments in a colour are on a gold ground, the ornaments should be separated from the ground by an edging of a darker colour.

PROPOSITION 17.

Gold ornaments on any coloured ground should be outlined with black.

PROPOSITION 18.

Ornaments of any colour may be separated from grounds of any other colour by edgings of white, gold or black.

PROPOSITION 19.

Ornaments in any colour, or in gold, may be used on white or black grounds, without outline or edging.

PROPOSITION 20.

In "self-tints," tones, or shades of the same colour, a light tint on a dark ground may be used without outline; but a dark ornament on a light ground requires to be outlined with a still darker tint.

PROPOSITION 21.

Imitations, such as the graining of woods, and of the various coloured marbles, allowable only when the employment of the thing imitated would not have been inconsistent.

PROPOSITION 22.

Flowers, or other natural objects, should not be used as ornament, but conventional representations founded upon them, sufficiently suggestive to convey the intended image to the mind, without destroying the unity of the object they are employed to decorate.

Let us now see how far these several propositions may be called axioms.

Proposition I.

COLOUR IS USED TO ASSIST IN THE DEVELOPMENT OF FORM, AND TO DISTINGUISH OBJECTS OR PARTS OF OBJECTS ONE FROM ANOTHER.

The most cursory glance at the works of nature will establish the truth of our first proposition. We see everywhere in nature colour assisting form, in producing distinctness: thus, flowers are separated by colour from their leaves and stalks, and these again from the earth in which they are planted; and, not to fatigue you with examples, it is at once evident how much in nature would be meaningless, but for the many charms of colour spread over the earth so lavishly.

Had nature applied but one colour to all objects, they would have been indistinct; but, by an ever-changing variety, each has its proper tone and hue, from the modest lily of the field to the parent of all colour, the glorious sun in the heavens.

The ancients ever obeyed this law; thus, the capitals of their columns are separated by colour from the shafts, and these, again, by colour from their bases or pedestals.

Proposition II.

COLOUR IS USED TO ASSIST LIGHT AND SHADE, HELPING THE UNDULATIONS OF FORM BY THE PROPER DISTRIBUTION OF THE SEVERAL COLOURS.

But for light and shade we should have been unable to recognise the distinctive forms of objects; without it

a globe would be but a circle, the light on the exposed surface and the shade on the retiring surface alone convince us of its rotundity.

We find, therefore, in nature's works colour assisting light and shade; by its help the modulations of form are rendered more apparent: were it otherwise, it would be to little purpose that the flower should be distinguished by colour from the leaf, if the individual form of the flower and the leaf had been extinguished in the process.

Proposition III.

THESE OBJECTS ARE BEST ATTAINED (*i.e.* objects or parts of objects are distinguished one from another, and the undulations of form are assisted) BY THE USE OF THE PRIMARY COLOURS ON SMALL SURFACES, AND IN SMALL QUANTITIES, BALANCED AND SUPPORTED BY THE SECONDARY AND TERTIARY COLOURS ON THE LARGER MASSES.

This proposition will not so readily be accepted as the two preceding. There are many who will object that the primary colours are the delight only of the savage and the uncultivated, but I answer that the primary colours are never vulgar or discordant when properly applied; the defect will lie, not with the colours, but with the want of skill of the hand that applies them. They must be used as in nature, with a sparing hand, on small surfaces, and in small quantities; the secondaries and tertiaries in larger masses,

and on larger surfaces, atoning for their lesser brilliancy by their greater volume.

We find in the works of the Egyptians, Greeks, Arabs, and Moors, during the best periods of their art, this beautiful law invariably followed: but, on the contrary, when the art of each civilisation declined, the primaries are no longer the ruling harmonies; the secondaries and tertiaries, from being subordinate, became dominant, and muddiness and indistinctness resulted.

In Egypt, during the reigns of her native kings, the primaries mainly prevailed; whilst under her Greek rulers art languished, and being practised rather from imperfect tradition than from poetic inspiration, the secondaries usurped the place of the primaries, and the beautiful harmonies which had before been produced by their combination were lost.

The progress to further decline is again remarkable under the Romans, who taught the Egyptians to build up temples of greater magnitude, with stones more nicely fitted, with the mechanical processes more advanced, but with the poetic fire wanting, and naught but a barren work of skill remaining.

The same decline may be observed with Greek architecture. In the temples of Greece, as far as we are acquainted with them, the primaries were dominant; whilst in Greek towns under Roman rule, the true principles of their noble ancestors were thrown aside, and the caprices of their Roman masters substituted.

When the truly enchanted palaces of the Moors fell into the hands of the Catholic kings, who despised a civilisation they were unable to appreciate, the true principles which the Moors had learned in their worship and observation of nature's works were despised and rejected, because, as now, not understood. Their blues and reds were repainted with green and purple, without law or reason.

Trace the history of our own Gothic buildings, of stained glass, turn over the pages of the Illuminated MSS. of every age, you will find everywhere the same cause at work.

"Each civilisation in the ascendant goes to nature "for its principles, and enriches its own inventions with "the choicest conceptions of antecedent ages; while for "this admirable union of conscientious erudition and "fertile originality, declining civilisations substitute only "a series of decrepit, disordered, and faithless caprices.

"We possess the inestimable advantage of living in "an age when nothing of the past remains a secret; "each stone of any monument of every clime has told "its tale, which is now brought within the reach of our "own fire-sides; yet, hitherto, how little have we shown "ourselves worthy of this great privilege! The ease with "which our knowledge might be obtained has made us "indifferent of its acquirement, or led us to substitute "an indolent and servile imitation for an intelligent and "imaginative eclecticism."*

* "Journal of Design" for June, 1851.

Proposition IV.

THE PRIMARY COLOURS SHOULD BE USED ON THE UPPER PORTIONS OF OBJECTS, THE SECONDARY AND TERTIARY ON THE LOWER.

This proposition, founded also on observation of Nature's works, was generally obeyed in the best periods of art, but nowhere so well or so universally as in the buildings of the Moors, who confined the primary colours entirely to the upper portions of their buildings, and the secondary and tertiary to the lower. In Egypt we do see occasionally the secondary (green) used in the upper portions of their temples; but this arises from the fact that ornaments in Egypt were symbolical, and more nearly represented natural objects than in other styles. If a lotus-leaf were used in the upper portions of a building, it would necessarily be coloured green, but the law is true in the main: the general aspect of an Egyptian building gives us the primaries above and the secondaries below.

Even in Pompeii, we find this sometimes; in the interior of their houses there is a gradual gradation of colour downwards from the roof, from light to dark, ending with black: but this is by no means so usual as to convince us that they felt it as a law, for there are many examples of black immediately under the ceiling. This law will be found of great use in the decoration of the interiors of our dwellings. Ceilings and cornices

may be decorated with the primaries of prismatic intensity on the small surfaces of their mouldings; the walls, on the contrary, from presenting larger masses, should be of secondary colour, of low tones and hues. The dados still stronger in colour, and more broken in hue. The carpets should be darkest of all, composed of broken secondaries and tertiaries, so interwoven and neutralised that they retire from the eye, both as furnishing repose for the colouring of the upper portions and as back-grounds to the furniture placed upon them.

The favour with which the colouring of the interior of the Great Exhibition building, after running the gauntlet of much adverse criticism, was ultimately received by the public, emboldens me here to refer to it as a familiar illustration of the practical working out of our four first propositions.

The objects I had proposed to myself were,—

1. In obedience to Proposition I.:

So to bring out the construction of the building that it should appear higher, longer, and more solid.

2. In obedience to Proposition II.:

So to colour each particular part that its light and shade should be assisted, and its peculiar form made most manifest.

3. In obedience to Propositions III. and IV.:

So to balance the primary colours used for this purpose that they should harmonise with the varied contents of the building, of every imaginable hue, and to which I trusted for the completion of the scheme.

I may be permitted to say that these objects were, if not fully attained, yet were so beyond what the most sanguine could have hoped. The effect which I had sought of the colouring of the building forming a neutralised bloom over the whole of the contents was attained to such an extent, that those who only saw it when completed looked in vain for that vulgar and discordant colouring, of which they had heard so much during the progress of the works.

The blending of the three primary colours in the roof of the nave, where the effect could be seen uninterruptedly, was most complete, and produced an artificial atmospheric effect of a most surprising kind. This artistic effect has been lost since the removal of the canvass from the roof; and although there are many who will prefer it, as it is more like their "Crystal Palace," yet it is no longer an art problem resolved. By reason of the glare from the glass the red and yellow have disappeared, and we see simply a repetition of blue girders with sky between. The consequence is, that the effect of aerial perspective which it had has disappeared; the girders at the extremities of the building fall so rapidly one on the other, that they present but a mass of blue. The nave, judged of now from the perspective of the roof, appears two or three hundred feet shorter than it did; because the eye has lost the power of measuring beyond a certain distance, whilst when the canvass was on the roof the eye was able to distinguish girder from girder, down to the very last.

The columns also have lost much by the removal of the background; they were painted light, in order that they might tell out strongly in relief on the articles exhibited; these being removed, their lightness is now a defect: they lose in appearance of solidity.

Proposition V.

The primaries of equal intensities will harmonise or neutralise each other in the proportions of 3 yellow, 5 red, and 8 blue,—integrally as 16.

The secondaries, in the proportions of 8 orange, 13 purple, 11 green,—integrally as 32.

The tertiaries, citrine (composed of orange and green), 19; russet (orange and purple), 21; olive (green and purple), 24;—integrally as 64.

It follows that,

Each secondary (being a compound of two primaries) is neutralised by the remaining primary, in the same proportions; thus, 8 of orange by 8 of blue, 11 of green by 5 of red, 13 of purple by 3 of yellow.

Each tertiary (being a binary compound of two secondaries) is neutralised by the remaining secondary; as 24 of olive by 8 of orange, 21 of russet by 11 of green, 19 of citrine by 13 of purple.

We derive these invaluable rules from the works of Field, who was one of the earliest to establish the fact,

now universally received, that the prismatic ray consisted of 3 colours, and not 7. He has shown by direct experiment, that a ray of light consists of yellow, red, and blue, in the proportion of 3 yellow, 5 red, and 8 blue.

It is evident, that the nearer we can approach to this state of neutrality the more harmonious will colouring become. An examination of the best ancient specimens of colouring will show that this law has been well observed; that is to say, broadly, there has been as much blue as of yellow and red put together: thus the light and the shade balancing each other.

Proposition VI.

Each colour has a variety of tones when mixed with white, or of shades when mixed with grey or black.

When a full colour is contrasted with another of a lower tone, the volume of the latter must be proportionally increased.

This follows naturally from Proposition V., for if 5 red is neutralised by 11 green of equal intensities, it is evident we should require a much larger quantity of pale green to effect the same purpose.

Proposition VII.

Each colour has a variety of *hues*, obtained by admixture with other colours, in addition to white, grey, or

black: thus we have orange yellow on the one side, and lemon yellow on the other; so of red, scarlet red, and crimson, and of each every variety of tone and shade.

WHEN A PRIMARY, TINGED WITH ANOTHER PRIMARY, IS CONTRASTED WITH A SECONDARY, THE SECONDARY MUST HAVE A HUE OF THE THIRD PRIMARY.

Thus, orange yellow will require to neutralise it, blue purple; lemon yellow, red purple; scarlet red, blue green; crimson red, yellow green.

The truth of these two last propositions is so self-evident that they would hardly require discussion here, were we not reminded by all we see around us how much they are every day disregarded.

It is evident that, for the proper balancing of such infinite varieties of tones, shades, and hues, no mechanical means can be found of estimating the value of the colours, or the relative areas they should occupy: but we are fortunately endowed with an organ as susceptible of cultivation, in this respect, as the ear for sound; and although many amongst us are more favourably endowed than others, both with ears for sound and eyes for form and colour, it is by study and cultivation alone that any approach to perfection can be reached, and he who can carry in his mind the proportions which science thus teaches us, will be in a far better condition to arrive at success than he who trusts to his unaided instincts and natural gifts.

In the East Indian collection of textile fabrics at the Great Exhibition, the perfection at which their artists have arrived is most marvellous; it was hardly possible to find a discord,—contrasting colours appeared to have just the tone and shade required; the contrivances by which they corrected the power of any one colour in excess most ingenious. It would occupy too much of your time more particularly to refer to them here; but, fortunately, a portion of the collection has been purchased by the Government, and will shortly be exhibited to the public: if examined with attention, they will afford most fruitful lessons, not only to the student, but to every cultivated mind. The additional charms which colour gives to everything which surrounds us, should render none indifferent to the cultivation of the faculties implanted in them to enable them to understand and appreciate it.

As Field wisely says, "He who can regard Nature "with the intelligent eye of the colourist, has a bound-"less source of never-ceasing gratification, arising from "harmonies and accordances, which are lost to the "untutored eye."

It would be very desirable that we should be made acquainted with the manner in which, in the education of the Eastern artists, the management of colour is made so perfect. It is most probable that they work only from tradition and a highly-endowed natural instinct, for which all Eastern nations have ever been remarkable; they have the further advantage of working out the

style which grew up with their religion, with which every thought and action of their daily life is interwoven.

Since the Reformation, which with us separated the tie which should exist between Religion and Art, we have been deprived of this advantage: the want of unity in feeling has caused a want of unity in expression; there is the same disorder in the art, as scepticism in the mind. This acting generation on generation, each descends lower and lower.

Children born in an age of ugliness cannot hope to have their instincts quickened for the beautiful; but, on the contrary, the natural instinct will be extinguished, and will no longer be born with them. I can conceive a paternal and wise government visiting with punishment all those who produce abortions in art, as justly as those who lower the tone of the morals of society; in either case they rob the rising generation of their birthright.

If it be true, as Field says, "that whatever refines "the taste, improves the morals, enhances the powers, "and promotes the happiness of the people," the converse is true also.

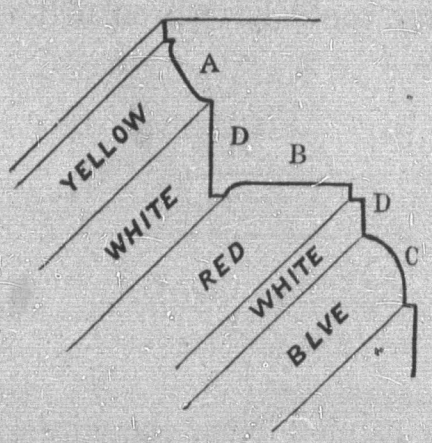
That which corrupts their taste, debases their morals, destroys their powers, and promotes their misery.

Proposition VIII.

In using the primary colours on moulded surfaces we should place blue, which retires, on the concave surfaces; yellow, which advances, on the convex; and red, the intermediate colour, on the undersides: separating the colours by white on the vertical planes.

When the proportions required by Proposition V. cannot be obtained, we may procure the balance by a change in the colours themselves: thus, if the surfaces to be coloured should give too much yellow, we should make the red more crimson and the blue more purple; and we should take the yellow out of them: so, if the surfaces should give too much blue, we should make the yellow more orange and the red more scarlet.

This proposition will be better explained by the following diagram: —

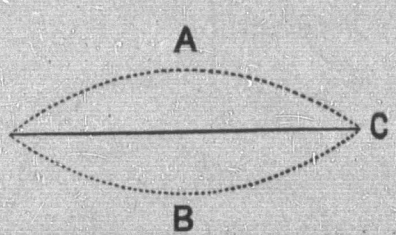


It is evident that, as the object must be to cause A

to appear to advance, it is here we must put the yellow, both from its position and from its form: on the contrary, we place blue at C, as the retiring colour, and also as assisting the concavity of the moulding. Red, the most positive of all colours, looks best in shadow; we, therefore, place it at B; the fillets, or vertical planes at D, we make white, as useful in separating the colours from harsh contrast.

The positions of the colours, yellow and blue, are subject to modifications, according to circumstances; but I always find this law most useful when applied to red. Red never looks well when seen in a strong light; it is too positive, and painful to the eye: on the contrary, in soffites, in hollows or depths of any kind, it looks most brilliant.

In the Great Exhibition, you may remember the alarm which was caused by my painting the undersides of the girders red; but I think you will see by this diagram that they could have been of no other colour.



Had they been painted blue, the girders would have appeared curved in the direction of A; if yellow, in the direction of B: they would appear straight only as red.

Proposition IX.

THE VARIOUS COLOURS SHOULD BE SO BLENDED THAT THE OBJECTS, WHEN VIEWED AT A DISTANCE, SHOULD PRESENT A NEUTRALISED BLOOM.

Colours should not only be used in the proportions laid down by Propositions V., VI., and VII., but they should be so interwoven that no one colour should attract the eye to the exclusion of the others; when viewed at a distance, they should melt into one another.

In the Oriental patterns we find this result invariably attained; they seem ever awake to correct the least tendency of any one colour to overpower the others: for instance, it is very common with them, when they have a massive gold ornament on a coloured ground, to allow the ground colour to reappear on the gold ornament, so that not only the volume of gold, when in excess, is thereby lessened, but the ground colour is carried into it, so that a perfect balance is obtained.

Proposition X.

NO COMPOSITION CAN EVER BE PERFECT IN WHICH EITHER OF THE THREE PRIMARY COLOURS IS WANTING, EITHER IN ITS NATURAL STATE OR IN COMBINATION.

This is evident. Blue and yellow, red and yellow, red and blue, would be discords; so green and yellow, purple and blue, orange and red; yet each of these discords may be resolved by the interpositions of the neutrals

white or black, which contain all colours in the positive and the negative state.

They are also harmonised by the interposition of metallic gold, of which more hereafter. They, of course, may exist on parts of objects if the third colour is so near at hand as to be comprehended in the same glance.

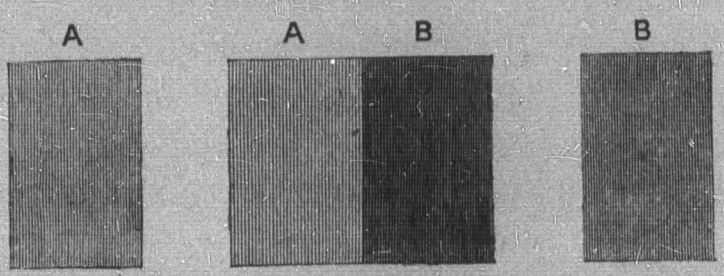
We now come to the discussion of Propositions XI., XII., XIII., XIV., derived from the "law of the si- "multaneous contrast of colours" of Mons. Chevreul, who, by a series of experiments carried on for a number of years, established the fact that colours juxtaposed influence each other in a most remarkable degree. He establishes two kinds of contrast: the one, contrast of tone, or the modification which each colour suffers in intensity; the other, contrast of colour, or the modification which each colour suffers in hue.

He tells us, that all coloured bodies, besides reflecting the coloured rays proper to their particular colour, reflect a certain number of white rays and a certain number of others, which are complimentary to the colour of the particular bodies; for instance, a red body, at the same time that it reflects red rays in a large quantity, reflects also white rays and a certain number of green rays.

Proposition XI.

WHEN TWO TONES OF THE SAME COLOUR ARE JUXTAPOSED, THE LIGHT COLOUR WILL APPEAR LIGHTER AND THE DARK COLOUR DARKER.

We have here the contrast of tone: as the light colour will reflect more white rays than the dark colour, their superior force will extinguish the white rays reflected from the darker colour; hence this will appear darker. This may be readily tested by placing two halves of the same sheet of paper of a light colour, and the two halves of the same sheet of paper of a darker colour, on a white screen, thus,—



Placing the half of the light-coloured sheet A, edge to edge with the dark-coloured sheet B, and placing the other halves A and B at a little distance on either side, it will be seen that A standing by itself will appear darker than A where it joins B, and that B will be lighter than B where it joins A. It will be seen, further, that the effect is strongest at the edges, and goes on diminishing to the extremities.

Proposition XII.

When two different colours are juxtaposed, they receive a double modification: first, as to their tone, the light colour appearing lighter and the dark colour darker; secondly, as to their hue, each will become tinged with the complimentary colour of the other.

If we take two half sheets of pale red, and two half sheets of dark blue, and place them as in the former experiment, we should see the pale red become paler, and at the same time be tinged with orange, and the dark blue would become darker and be tinged slightly with green.

Proposition XIII.

Colours on white ground appear darker, on black ground lighter.

The white by its superior force extinguishes the white rays reflected by the colour, and we see the colour purer—as black reflects but few white rays, the white rays reflected by the colour appear more prominent by contrast, and the colour appears lighter.

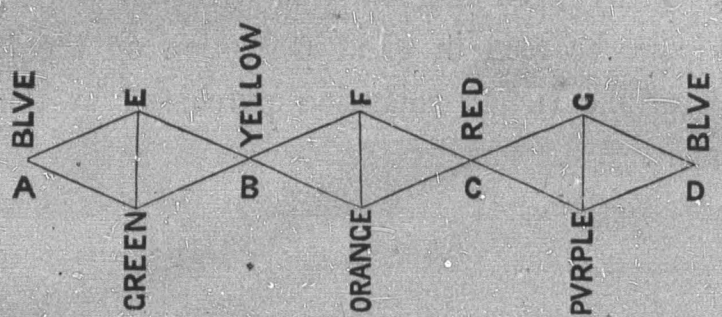
Proposition XIV.

Black grounds suffer when opposed to colours which would give a luminous complimentary.

As light colours have dark complimentaries, the dark added to the black increase its brilliancy; those, on the contrary, which have light complimentaries, must diminish its intensity.

Thus, orange on a black ground would add blue to the black, and make it more intense; but blue on a black ground would add orange to the black, and destroy its brilliancy.

It will be evident how valuable a perception of this law of contrast must be to any one engaged in any way with the employment of colour, as any colour can be subdued or heightened in effect by juxtaposition. In fact, colours are mere relative terms; they change at every instant: that which appears deep red when compared with an orange red, becomes orange red when compared with a still deeper red. Blue, red, yellow, and all other colours, can exist only in the mind, as you will see by this diagram.



We have at the points A, B, C, D, blue, yellow, red, blue; on the lines E, F, G, green, orange, purple.

It is evident, that at the least departure from the point C on the left, red would be tinged with orange, and at the least departure on the right would become tinged with purple. So, at the least departure from the line F on the left, the orange would have an excess of yellow, and on the least departure on the right an excess of red, so that we can no more see red or orange than we can see a point or a line; and even if we could see them it could only be for an instant, as the complimentary rays reflected from them would gradually lower their tone: so of all the other colours. Chevreul mentions a case in point: he says that a shopkeeper exhibiting to a customer a number of pieces of red silk, one after the other, of the same colour, those last shown would invariably appear more feeble in colour than the first. A shopkeeper, wise in his generation, should, after showing one or two pieces of red silk, interpose a silk of another colour—green, for instance—to restore the judgment of the eye.

We now come to a series of Propositions which we derive chiefly from the study of Oriental works, and which may be seen in great perfection on the textile fabrics of the Indian collection purchased by the Government.

Proposition XV.

WHEN ORNAMENTS IN A COLOUR ARE ON A GROUND OF A CONTRASTING COLOUR, THE ORNAMENTS SHOULD BE SEPARATED FROM THE GROUND BY AN EDGING OF A LIGHTER COLOUR; AS, A RED FLOWER ON A GREEN GROUND SHOULD HAVE AN EDGING OF LIGHTER RED.

The reason of this we gather from the law of contrast, that when the eye dwells upon a spot of colour on a contrasting colour, each has a tendency, by reason of the strong contrast, to furnish the complimentary colour of the other; and this effect is strongest towards the edges, so that the colours have a tendency to fuse one into the other, and indistinctness results. To confine the eye, therefore, within the ornament, it is necessary to define the form, and this is well effected by the outline of the lighter colour.

Proposition XVI.

WHEN ORNAMENTS OF ANY COLOUR ARE ON A GOLD GROUND, THE ORNAMENT SHOULD BE SEPARATED FROM THE GOLD GROUND BY AN EDGING OF DARKER COLOUR.

The reason of this is that the gold ground, from its greater power, has a tendency to invade or overflow on to the coloured ornament, and this is at once arrested by the darker edging.

Proposition XVII.

Gold ornaments on any colour should be outlined with black.

The cause here is the same, viz. the tendency of the gold to overrun the ground, which is arrested by the black line; and as gold must be regarded as a neutral, it is best effected by the neutral black.

Proposition XVIII.

Ornaments of any colour may be separated from grounds of any other colour by edgings of white, gold, or black.

White, black, and gold are neutrals, and therefore by their interposition prevent the simultaneous contrasts from being sensibly felt, and preserve the integrity of the colours.

Proposition XIX.

Ornaments in any colour may be used on white or black ground without outline or edging.

The white ground reflecting all the rays, destroys by its superior intensity the white rays reflected by the coloured body, and its form becomes perfectly defined. The black ground absorbs all the rays, or reflects but very feebly white rays, so as scarcely to modify the colour juxtaposed.

Proposition XX.

In self-tints, tones or shades of the same colour, or of the same hue, a light tint on a dark ground may be used without outline; but a dark ornament on a light ground requires to be outlined with a still darker tint.

The reason of this is, that the light tint being the most advancing is able to detach itself from the ground, but the dark tint has a tendency to pierce through the ground if not arrested by a darker outline. Ornaments in relief, do not appear to require the interposition of white or any other colour; the light edge on the one side, and the shadow on the other, is sufficient to prevent harshness of contrast. This may help to explain how it is that ornaments in metallic gold may be placed on grounds of any other colour without discordance. Green and gold are well known as most harmonious, yet green and yellow are equally well known to be discordant: one cause is, that gold, more in the nature of a secondary, is slightly orange; and, moreover, from its granular surface, a series of hills and valleys, and furnishes both light and shade.

Our two last propositions belong only incidentally to the subject; but I offer them for discussion here, as I think it most desirable that attention should be directed to the subject, for the prevention of practices which have increased, and are increasing daily, and are fraught with

most disorganising influence on the taste of the present generation.

Proposition XXI.

Imitations, such as the graining of woods and of the various coloured marbles, allowable only when the employment of the thing imitated would not have been inconsistent.

There has often been much discussion upon the propriety of imitations in Decorative Art, such as imitations of the graining of woods and various coloured marbles; there is no doubt that, of late years, the skill obtained by our artisans in producing these imitations, has caused the practice to be very much abused, but it need not for that be entirely discouraged.

The principle which should regulate the employment of imitations has never yet been defined: it appears to me, that *imitations are allowable whenever the employment of the thing imitated would not have been inconsistent.*

For instance, there can be no objection to grain a deal door in imitation of oak, because the mind would be perfectly satisfied if the door were oak; but it would be an absurdity and abuse of means to paint it in imitation of marble.

Again, the practice of covering the walls of halls and staircases with paper, in imitation of costly marbles, is very objectionable, because the employment of marble to such an extent would be inconsistent with the cha-

racter of most houses, and, consequently, the sham is much too glaring: on the contrary, were the pilasters and columns of a hall only painted, the objection would cease, seeing that the mind would be satisfied with the reality. A violent instance of the abuse of graining existed formerly in the Elgin Room at the British Museum, where beams on the ceiling, thirty feet long, were splashed in imitation of granite. Here was a manifold absurdity, as no granite beam could have supported itself in any such situation. The door-jambs of an opening, on the contrary, might be imitation granite without inconsistency, as in such a situation granite would be useful as indicating strength.

In the outcry against the mode of colouring I proposed for the interior of the Great Exhibition, my opponents fell into an error of this kind; led away by the desire of having the metallic character of the building expressed, the majority were in favour of colouring the whole of that vast edifice in imitation of bronze, entirely forgetting that the employment of so costly a material for such a structure would have been impossible, and would have had the further disadvantage of being too weak to stand: therefore its imitation would have been an absurdity, quite independent of the artistic objections to such a mode of colouring, which were many.

The mode I adopted treated the whole as a painted surface, and the eye was left at liberty, and was quite able to distinguish the material painted, by its form and

scantling; no one, as was so often prophesied, mistook the columns for wooden posts, because no wooden posts could have existed in such a form under such circumstances.

Proposition XXII.

Flowers or other natural objects should not be used as ornament, but conventional representations founded upon them, sufficiently suggestive to convey the intended image to the mind without destroying the unity of the object they are employed to decorate.

We find this law universally obeyed in all the best periods of art, and equally violated when art declines; those who conventionalised the most were the Mahometan races, who, forbidden by their creed to represent living forms, carried the conventionality of ornament to the highest perfection.

The Egyptians, with whom every ornament was a symbol, yet took care so to use them as never to violate a sense of propriety. The Greeks equally conventionalised in their ornament; and although the law will not appear to hold good in their application of sculpture to architecture, yet we see here they adopted a conventional treatment both of pose and relief, and very different to that of their isolated works.

In the later Gothic buildings the floral ornaments have a much nearer approach to nature, and are less

conventional in arrangement than those in the earlier buildings. In the early illuminated MSS. the ornaments were conventional, and their illuminations were in flat tints with little shade and no shadow, whilst in those of a later period highly-finished representations of natural flowers were used as ornament, casting their shadows upon the page, the illuminations also were highly-finished pictures, evidently unfit for the pages of a book where the affected relief was in danger of crushing.

The Chinese, whose works, however wanting refinement and art-knowledge, yet steer clear of this; and all their figures, buildings, flowers, are so conventional in treatment, that they never shock the eye or destroy the unity of the object which they decorate.

If our proposition, then, be sound in theory, and be fortified by the practice of past ages, it applies with great force to the mural decorator, the paper-stainer, the calico-printer, the weaver, and the potter; and, in fact, to all engaged in the decorative arts.

First, Mural Decorators.

It is very evident that the treatment of a picture in fresco should be very different to that of a painting in oil; in the painting in oil, all the resources of art are invoked to make, as far as possible, the picture appear a reality; within his frame the painter has to himself a world; but it should be far different with a fresco; the flatness of the wall should never be disturbed; all chiaro-scuro should be avoided, and the

figures should be on one plain: in fact, a true fresco should be little more than a painted bas-relief. Such were the early frescos, or, more early still, the mosaic paintings.

The Paper-Stainer.

The art of the paper-stainer has been very much neglected in this country, and is, indeed, but little better in France, although they have brought to bear upon the subject a great deal of mechanical skill in printing, and much good drawing and designing, yet it is drawing and designing mostly on false principles. It is evident, that one of the first principles to be attended to in the adornment of the walls of an apartment is, that nothing should disturb their flatness; yet it is very difficult to find a paper that does not in some way violate this rule: they are either large masses of conventional foliage, generally a variation of the eternal acanthus-leaf surrounding patches of unbroken colour, or representations of fruits or flowers twisted into the most unwarrantable of positions. Here are specimens of English papers, than which nothing can be more absurd,—a wall covered with repetitions of the same subject, men and horses standing on each other's heads, or steamers floating on each other's masts. You will say, they are cheap papers, below criticism; but here we have a French paper which has had a great run in this country: you see it is a wall of strawberries.

Now, in what are the English papers more absurd than this? Beautiful as this strawberry pattern is, well drawn, well printed, the colours nicely distributed over the surface, it is yet offensive, because it violates the first of all rules—propriety.

We say, therefore, that all direct representations of natural objects in paper-hangings should be avoided: first, because it places these objects in unseemly positions; secondly, because it is customary in almost every apartment to suspend on the walls pictures, engravings, or other ornamental works, and therefore the paper should serve as the background, and nothing on it should be obtrusive or advancing to the eye. Diaper-patterns in self-tints are safest for this purpose, but when varieties of colours are used, the Oriental rule of so interweaving the form and colour as that they may present a neutralised bloom when viewed at a distance should never be departed from.

The prevailing colours of the walls of rooms hung with printed paper should, of course, vary with the character of the room and the aspect. Halls and staircases look well hung with green, because the eye on entering a house is generally fatigued with the strong glare of daylight, and the green is the most refreshing. Studies and dining-rooms look well with dull reds in diapers or flocks, which may be enriched with gold; these form good backgrounds for engravings or pictures, but the reds or greens must never be positive colours, but low-toned and broken, so as not to disagreeably impinge

upon the eye. In drawing-rooms, where the paper has to do more towards furnishing and beautifying a room, they may be more gay: almost any tone and shade of colour heightened with gold may be used, provided always that the colours are so arranged and the forms so interwoven that a perfect balance be obtained and the eye never attracted to any one portion.

The Calico-Printer and the Weaver violate our proposition at every step. We have ladies' dresses, ribbons, furniture-prints, carpets, which are the more and more admired from the more perfect knowledge of botany they display, violating the sense of propriety at every step: we walk on flowers and tropical plants crushing beneath our feet; we have chintzes covered with roses in violent contortions over the sinuosities of our furniture, or broken in twain by the folds of curtains; ladies robed in rose, shamrock, and thistle (a high achievement); the fast man, with race-horses and ballet-girls printed on his shirt, and pointers woven on his neckerchief.

The Potter keeps pace with his fellows; without his flowers he believes his art would cease to be: with him consistency is disregarded,—he serves us flowers with every dish, magnified and microscopic.

So runs the fashion of the present day; would that its sun were set, that we might awake to a more healthy dawn!

I will beg to say, in conclusion, a few words on the

NECESSITY OF AN ARCHITECTURAL EDUCATION ON THE PART OF THE PUBLIC.

I have endeavoured to establish in the foregoing, that in all times but our own all ornamentation resulted from architecture; that in the present age we have no guiding principle in its design or unity in its application; that the architect had abandoned to inferior hands that which was his especial province. I have described much of the disorder which has resulted from this, and have still more to add on the same subject. I will further endeavour to establish two points,—first, that the education of our architects must undergo some change before we can hope that architecture and its attendant arts shall faithfully represent the wants, feelings, and faculties of our time; and, secondly, that this result can never be effectually obtained till a much higher amount of art-knowledge exists in us as a nation.

How is any change for the better to be brought about? It is certain that the production of a national style must be, as it ever has been, a work of slow development; yet, if never attempted, the problem never can be solved.

It seems to me,—now that we have so many schools devoted to the improvement of design as applied to manufactures, and that a movement in this direction, aided by this Society, is receiving a fresh impulse,—that if the Government were to undertake to gather together all the records of the past, and would disseminate that knowledge with correct principles for making use of it,

a vast stride would be made in the right direction.

The system of architectural education followed in France is very superior to that pursued in this country. Here the young architect is apprenticed to an architect in practice as to a trade, and is engaged for five or seven years on the works of his master: he gains thereby a good knowledge of construction and of the business of an architect, but has but little opportunity of studying architecture as a fine art. In France, on the contrary, there are, besides the drawing-schools which exist in every town, where the young may obtain much elementary knowledge, there are in Paris many studios where professors devote their time to the instruction of a large number of pupils, making them thoroughly acquainted with the works of every period, and giving them a thorough knowledge both of architecture as a fine art and of construction in theory.

The pupils of these various studios are mostly attendants at the Architectural Academy, where they once a-month produce designs in competition for a given subject, and they are assisted in the formation of these by their professor. One consequence resulting from this system is, that we see in France at any given period a much greater unity in the character of their works; and there is not that disorder and waste of forces which we see in this country, where each architect is pulling in a different direction.

Works executed in France have a family resem-

blance not to be found in those of this country; the influence of the professor is much more felt, and schools of architecture are thereby formed, much as were the ancient schools of painting.

All these architectural students do not become architects; those who do so, when they have finished their studies, become clerks of the works under government architects, where they learn the practice of their profession, and ultimately practise on their own account. Many of those who have not been sufficiently advanced, or who want government influence to be so placed, turned to other professions connected with architecture, —become decorators and designers for manufacturers. It is this cause which gives to the designs of France the superiority they have. Mostly all their designers have had an architectural education. I do not mean to say that the French have made much more progress towards the formation of a national style than we have; what they have done is, that, at any one period, they have carried out the reproduction of any extinct style with much more unity. The fashion, as long as it lasted, has been general; and we do not see in France, as we see here every day, the building of one style of architecture, the decorations of another, and the furniture of a third, with every variety of age and period. However, it is the kind of education as pursued in France which I think it would be useful if our Government could be prevailed upon to foster. The Schools of Design have not hitherto produced any marked im-

provement in the designs of our manufacturers, and have been conducted as if it were the intention only to make painters. The study of the human figure has been carried to excess, and much labour wasted upon it; useful as it is for refining the taste and teaching accurate observation, yet it is a roundabout way of learning to draw for the designer for manufactures. I may here remind you, that the Eastern nations, who appear to excel all others in their works of ornamentation, are forbidden by their creed to make any representation of the human figure; and it is, probably, to this cause that we may attribute their excellence in ornament.

I cannot but feel, that if the education of the Government Schools were made more architectural much real benefit would result to this country; besides that the study of architectural forms must be the best preparation for the designer of ornament, they would do more good in helping to make architects than painters, to whom individuality is less of an evil. Architects should be educated in masses, because it is their duty to give expression to common wants and common feelings. The opposite system has been in use in this country, and has most assuredly failed. The knowledge we have acquired of the works of past ages has been procured by individual efforts, but, unfortunately, with but small results. Each has been tempted to exaggerate the importance of the style of his predilection, and which he undertook to illustrate.

That a little knowledge is a dangerous thing has proved most true in architecture and its attendant arts.

As each new architectural publication appears, it immediately generates a mania for that particular style. When Stuart and Revett returned from Athens, and published their work on Greece, it generated a mania for Greek architecture, from which we are barely yet recovered. Taylor and Cresy did as much for the architecture of Rome. The travels of Belzoni and his successors produced the Egyptian Hall, and even Egyptian-faced railway tunnels. The celebrated French work on the architecture of Tuscany, and "Letarouilly's Modern Rome," have more recently inspired us with a desire for Italian palaces.

The works of the elder Pugin and Britton, with a host of followers, have flooded the country with Gothic buildings; with which, notwithstanding the learning and research they exhibit, I must frankly avow I have but little sympathy. I admire and appreciate the Gothic buildings, which were the expression of the feelings of the age in which they were created, but I mourn over the loss which this age has suffered, and still continues to suffer, by so many fine minds devoting all their talents to the reproduction of a galvanised corpse.

Instead of exhausting themselves in the vain attempt, who will dare say that had these same men of genius, as they certainly are, directed their steps forward instead of backward, architecture would not have made some pro-